

REMARKS

The Abstract has been revised such that it contains less than 150 words.

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claim 1, 5, 6, 8, 10 and 11 have been amended for clarity.

The Examiner has rejected claims 1-8 and 10-12 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,246,698 to Kumar in view of U.S. Patent 6,289,000 to Yonge, III. Applicants acknowledge that the Examiner has allowed claim 9.

The Kumar patent discloses an in-band on-channel broadcasting method and system in which a method of decoding possibly mutilated code words is arguably disclosed.

The Yonge, III patent discloses a frame control encoder/decoder for robust OFDM frame transmissions which arguably uses a generator matrix to obtain the information word embedded in decoded code words.

Applicants submit that while Kumar arguably discloses a method of decoding possibly mutilated code words, this method is not hardly the method claimed in claim 1, nor the apparatus claimed in claim 11. In particular, the subject invention, as claimed in claim 1 includes "decoding differences (D) of a number (L-1) of pairs of possibly mutilated code words (r_i , r_{i+1}) to obtain estimates (u, v) for the differences of the corresponding pairs of

code words (c_i, c_{i+1}) ". While Kumar discloses forming "differences", these differences are in bit positions between each of the re-encoded estimates and the corresponding received estimate, as opposed to "differences of a number of pairs of possibly mutilated code words". Further, there is no disclosure in Kumar of decoding the differences "to obtain estimates for the differences of the corresponding pairs of codewords" as specifically claimed in claim 1.

Further, the invention, as claimed in claim 1, includes "combining said estimates (u, v) to obtain a number (L) of at least two corrupted versions (w_j) of a particular code word (c) ". While Kumar discloses "estimates", these estimates are not formed by decoding differences of a number of pairs of possibly mutilated code words, and further, these estimates are not combined "to obtain a number of at least two corrupted versions of a particular code word, as specifically claimed in claim 1.

While Yonge, III discloses the use of a generator matrix, Applicants submit that Yonge, III does not supply that which is missing from Kumar.

With regard to the prior claim limitation "decoding differences (D) of a number $(L-1)$ of pairs of possibly mutilated code words (r_i, r_{i+1}) to obtain estimates (u, v) for the differences of the corresponding pairs of code words (c_i, c_{i+1}) ", the Examiner now states:


"The Examiner's interpretation of this limitation, in accordance with MPEP 2111, is to form difference between at least two code words, since "a number of pairs" can refer to 1 or more and pair(s), since 1 is a number. Therefore with this interpretation, Kumar teaches (col. 3 1, lines 1-17) the number of differences in bit positions (i.e. the Hamming distance) between each of the re-encoded estimates and the corresponding received estimate prior to decoding and reencoding, is approximately proportional to the bit error rate (BER) for the codeword prior to decoding. When the determined BER estimates for the two codeword estimates are substantially different, the receiver system selects the decoded codeword from the pair with the lower BER (smaller Hamming distance) for propagation as the most probable source bit information for that codeword."

In view of the above, Applicants have amended the claims to indicate the limitation as "decoding the different of at least two (L-1) pairs of possibly mutilated code words...."

In view of the above, Applicants believe that the subject invention, as claimed, is not rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicants believe that this application, containing claims 1-12, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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